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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/749,178	KRISHNAMURTHY ET AL.	
	Examiner	Art Unit	
	Anthony T Ton	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 December 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTIONS

Drawings

1. The drawings are objected to because of the following informalities:

a) Acronym "**TYP**" in **Figs.1, 2, 3** and **6** is not shown in the specification. What does the acronym "**TYP**" stand for?

Examiner suggests giving a full spelling for the acronym at least once in the specification.

b) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters (parameters) "PG(**A.1**)" and "PEER GROUP (**TYP**)" have both been used to designate the same a peer group in **Fig.2**.

c) Term "FIG..2" is not appropriate.

Examiner suggests changing this term to "FIG.2".

d) Term "**DEBUG IE INFORMATION**" in step 114 of **Fig.10** is not appropriate.

Examiner suggests changing this term to "**DEBUG IE**".

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

a) Acronym "**TTL**" shown in page 3 line 2; its original meaning cannot be found in the specification. What does the acronym "**TTL**" stand for?

Examiner suggests giving a full spelling for the acronym at least once in the specification.

b) Term "IE instruction field **52**" in page 22 line 21 does not comply with character "**50**" in Fig.7.

Examiner suggests changing this term to "IE instruction field **50**".

c) Term "**a view bits**" in page 23 line 17 is not appropriate.

Examiner suggests changing this term to "**a view bit**".

Appropriate correction is required.

Claim Objections

3. **Claims 5, 11, 15, 18 and 26** are objected to because of the following informalities:

a) Term "receiving results **of** at least one failure diagnostic function from a network" in **Claim 5** line 3 and in **Claim 26** line 7 is not appropriate.

Examiner suggests changing this term to "receiving results **on** at least one failure diagnostic function from a network".

b) Term "the communication**'s** network" in **Claim 11** line 1 is not appropriate.

Examiner suggests changing this term to "the communication network".

c) Term "communication **path** that **are** not" in **Claim 15** line 3 is not appropriate.

Examiner suggests changing this term to **either** "communication **paths** that **are** not" **or** "communications **path** that **is** not"; it is depending on the applicant's choice.

d) Term "it is passed **along** or dropped by switching devices **along**" in **Claim 15** line 2 is not appropriate.

Examiner suggests changing this term to "it is passed **along** or dropped by switching devices".

e) Term "switching **device(s)**" in **Claim 18** line 3 is not appropriate.

Examiner suggests changing this term to "switching **devices**".

f) a colon "**.**" after term "the debug **IE.**" in **Claim 26** line 5 is not appropriate.

Examiner suggests changing the colon "**.**" to a semi-colon "**;**" and the term becomes "the debug **IE;**".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. **Claims 15, 23** and **25** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) **Claim 15** recites the limitation "**the communication path**" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

b) **Claim 23** recites the limitation "**the communications path**" in lines 2-3, line 4, line 5, and lines 6-7 (four places). There is insufficient antecedent basis for this limitation in the claim.

c) **Claim 23** is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are:

the claimed limitation "**perform** at least **on failure** diagnostic functions" in line 10 is not quite clearly on the meaning of the "at least **on failure** diagnostic functions". Does the applicant mean "at least **one failure on** diagnostic functions"? There is insufficient antecedent basis for this limitation in the claim.

d) **Claim 25** recites the limitation "**wherein the computer-executable instructions**" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-3, 8 and 24** are rejected under 35 U.S.C. 102(e) as being anticipated by **Or et al.** (US Patent No. 6,532,237).

a) **Regarding to Claim 1**: **Or et al. disclosed** a method for diagnosing a failure in a network switching device comprising:

receiving a data packet containing a debug information element (IE) at the network switching device [see Fig.4: step 40, reading (receiving) the ASCII file (a data packet) containing PSTEs generated (debug IE)];

extracting the debug IE from the data packet *[see col.12 lines 23-24, the node parses the file]*; and

performing at least one diagnostic function on the network switching device in response to information contained in the debug IE *[see col.12 lines 31-36, for processing (performing) the now parsed PSTEs that together simulate a portion of an ATM network (at least one diagnostic function); and see col.13 lines 39-49, the statistics are analyzed and verified (diagnostic function) to ensure correction operation of the network].*

b) **Regarding to Claim 2**: **Or et al. disclosed** the method of Claim 1, further comprising communicating results of said at least one diagnostic function from the network switching device to a selected end point connected to the network switching device via a communications link *[see col.12 lines 36-40, the local PTSEs generation routine is modified (hence, based on results) to cause the node to generate a PTSE describing the simulated link 120 (via a communication link) in Fig.2 connecting the real PNNI node (the network switching device) to a logical node (a selected end point) in the virtual portion of the network].*

c) **Regarding to Claim 3**: **Or et al. disclosed** the method of Claim 1, wherein the debug IE is embedded in a connection management message *[see col.2 line 66 – col.3 line 5, signaling, i.e., the message flows (connection management message),*

signaling with mechanisms added to support source routing (the debug IE is embedded)].

d) **Regarding to Claim 8**: **Or et al. disclosed** the method of Claim 1, wherein the debug IE includes information identifying said at least one failure diagnostic function *[see col.12 lines 49-51, the file permits the ability to operate PTSEs having intentional error (at least one failure diagnostic function); and see col.13 lines 6-21, summary information (information identifying said at least one failure diagnostic function)].*

e) **Regarding to Claim 24**: **Or et al. disclosed** an article of manufacture comprising:

a computer-readable medium *[see Fig.2: simulated PTSE injection device 96 and Link 98]* having computer-executable instructions *[see col.12 lines 55-65, simulated PTSEs]* for performing the functions of receiving a data packet containing a debug information element (IE) *[see Fig.4: step 40, reading (receiving) the ASCII file (a data packet) containing PSTEs (debug IE)]*;

extracting the debug IE from the data packet *[see col.12 lines 23-24, the node parses the file read and builds PTSEs in binary form]*; and

performing at least one diagnostic function on a network switching device in response to information contained in the debug IE *[see col.12 lines 31-36, for processing (performing) the now parsed PSTEs that together simulate (at least one diagnostic function) a portion of an ATM network; and see col.13 lines 39-49, the statistics (diagnostic function) are analyzed and verified to ensure correction operation of the network].*

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 4-7, 9-14, 20-23** and **25-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Or et al.** (US Patent No. 6,532,237).

a) **Regarding to Claim 4**: **Or et al. failed to explicitly teach** the debug IE is formatted so as to be propagated transparently across network switching devices that are not configured to recognize the debug IE. *[However, **Or et al. disclosed** a special instruction that indicates the presence of a simulated network, the instruction directive to allow switches to be configured properly at turn on time (see col.14 lines 13-20). In addition, **Or et al. disclosed** input parameters that are used to generate PTSEs using software in the simulated PTSE injection device 96, and summary address information comprises ATM information advertised by each node (see col.12 line 63 col.13 line 38). Therefore, **Or et al. inherently disclosed** this subject matter of **Claim 4** because the special instruction and summary address information in the injection file can instruct the network switching devices that are not configured to recognize the debug IE can ignore such debug IE].*

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide such a subject matter of **claim 4** throughout the special instruction of **Or et al.**, as taught by **the applicant** so that a test in a

hierarchical PNNI based ATM network can be quickly accomplished, **the motivation being** to provide a resolution of conflicting PTSEs at a switching node.

b) **Regarding to Claim 5**: **Or et al. disclosed** a method for diagnosing a failure in a network switching device comprising:

embedding a debug information element (IE) in a message *[see Fig.4: the ASCII file (a message) containing PSTEs generated (embedding a debug IE)]*; and

receiving results of at least one failure diagnostic function from a network-switching device configured to respond to the debug IE *[see col.11 lines 10-20, a collection PTSEs that are injected into the node under test 27 (receiving results); and see col.12 lines 49-51, PTSEs having intentional error (failure)]*.

Or et al. failed to explicitly teach the debug IE is formatted so as to be propagated transparently across network switching devices that are not configured to recognize the debug IE. *[However, **Or et al. disclosed** a special instruction that indicates the presence of a simulated network, the instruction directive to allow switches to be configured properly at turn on time (see col.14 lines 13-20). In addition, **Or et al. disclosed** input parameters that are used to generate PTSEs using software in the simulated PTSE injection device 96, and summary address information comprises ATM information advertised by each node (see col.12 line 63 col.13 line 38). Therefore, **Or et al. inherently disclosed** this subject matter of **Claim 5** because the special instruction and summary address information in the injection file can instruct the network switching devices that are not configured to recognize the debug IE can ignore such debug IE].*

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide such a subject matter of **claim 5** throughout the special instruction of **Or et al.**, as taught by **the applicant** so that a test in a hierarchical PNNI based ATM network can be quickly accomplished, **the motivation being** to provide a resolution of conflicting PTSEs at a switching node.

c) **Regarding to Claim 6**: **Or et al. disclosed** the debug IE is embedded in a connection management message *[see col.2 line 66 – col.3 line 5, signaling, i.e., the message flows (connection management message), signaling with mechanisms added to support source routing (the debug IE is embedded)].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 5**.

d) **Regarding to Claim 7**: **Or et al. disclosed** the debug IE includes information specifying a network switching device on which the failure diagnostic function is performed *[see col.12 lines 49-51, PTSEs having intentional error (the debug IE includes information specifying a failure diagnostic function); and see col.13 lines 39-49, the statistics are analyzed and verified to ensure correction operation of the network (hence failure diagnostic function is performed)].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 5**.

e) **Regarding to Claim 9**: **Or et al. disclosed** a method for diagnosing a failure in a connection establishment path comprising a plurality of nodes in a communication network *[see Fig.6]*, comprising:

embedding a debug IE in a data packet *[see Fig.4: the ASCII file (a data packet) containing PSTEs generated (embedding a debug IE)]*;

propagating the data packet to a plurality of switching devices corresponding to respective nodes along the connection path *[see col.14 lines 21-37, Node 3 transmits a PTSE advertising its links to its neighbor, Once one of the nodes in the real portion is injected with simulated network, the other nodes in the real network soon learn about it via the normal process of flooding (propagating the data packet)]*; and

performing at least one diagnostic function on targeted switching devices among said selected switching devices *[see col.12 lines 31-36, for processing (performing) the now parsed PSTEs that together simulate (at least one diagnostic function) a portion of an ATM network; and see col.13 lines 39-49, the statistics (diagnostic function) are analyzed and verified to ensure correction operation of the network].*

Or et al. failed to explicitly disclose the step of extracting the debug IE at selected switching devices among said plurality of switching devices. *[In fact,* ***Or et al. did not explicitly teach*** *extracting the debug IE at many selected switching devices the same as that of the applicant. However,* ***Or et al. clearly disclosed*** *the step of extracting the debug IE at a selected switching device – the node under test (see Fig.2: Node Under Test 27, link 98, and simulated PTSE injection device 96); in this case, if Or et al. had a plurality of links 98 are used to connect to a number of selected switching devices, Or et al. would provide the desire step of extracting the debug IE at such a number of selected switching devices among the plurality of switching devices in a communications network].*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide such a step of extracting the debug IE at selected switching devices among said plurality of switching devices throughout the node under test 27, the link 98, and the simulated PTSE injection device of **Or et al.**, as taught by **the applicant** in order to simultaneously get test results at a plurality of switching devices in a plurality of nodes in a communication network, **the motivation being** to make the method of debugging and testing of Or et al. more efficient.

f) **Regarding to Claim 10**: **Or et al. disclosed** the debug IE is embedded in a connection management message *[see col.2 line 66 – col.3 line 5, signaling, i.e., the message flows (connection management message), signaling with mechanisms added to support source routing (the debug IE is embedded)].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9**.

g) **Regarding to Claim 11**: **Or et al. disclosed** the communication's network comprises a plurality of ATM switching devices *[see Fig.1 and col9 line 67, ATM network].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9**.

h) **Regarding to Claim 12**: **Or et al. disclosed** the debug IE includes information specifying the targeted switching devices *[see Fig.2: node 27; and see col.12 line 66, ATM address prefix].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9**.

i) **Regarding to Claim 13**: **Or et al. disclosed** the debug IE includes information identifying said at least one failure analysis function to be performed *[see col.12 lines 49-51, PTSEs having intentional error (failure diagnostic function); and see col.13 lines 6-21, summary information (information identifying said at least one failure diagnostic function)].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9.**

j) **Regarding to Claim 14**: **Or et al. disclosed** the selected switching devices correspond to switching devices supplied by a particular vendor *[see col.1 line 67 – col.2 line 2, customers of ATM network equipment some level of multi-vendor interoperability].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9.**

k) **Regarding to Claim 20**: **Or et al. disclosed** the targeted switching devices comprise switching devices along a specific portion of the connection path *[see Fig.1: path 18; alternate path fro the connection path 18 from one peer group to another peer group, example, from peer group A.1 to peer group A.4].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9.**

l) **Regarding to Claim 21**: **Or et al. disclosed** the targeted switching devices comprise switching devices that are members of a logical peer group in an ATM hierarchy *[see Fig.2: 27, 104, 106, 108, 110, 112 and 114 (members of switching devices); and 22 (a logical peer group in an ATM hierarchy)]* .

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9**.

m) **Regarding to Claim 22**: **Or et al. disclosed** the network comprises a PNNI (Private Network-Network Interface) network *[see Fig.1: 12 and 14]*.

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9**.

n) **Regarding to Claim 23**: **Or et al. disclosed** the method of Claim 9, further comprising:

identifying said plurality of switching devices comprising the communications path *[see col.13 lines 17-19, communication links]*;

identifying a switching device along the communications path corresponding to a failure point in the communications path *[see col.8 lines 31-35 and 52-55, checking implementation functionality, repeating records consisting of the originating node ID, peer group ID and the body of PTSE]*;

forwarding the message from switching device to switching device along the communication path until it reaches the switching device corresponding to the failure point *[see col.2 lines 13-20, forwards the message to an appropriate next node]*; and

encoding the debug IE so as to instruct the switching device corresponding to the failure point to perform at least on failure diagnostic functions to identify why the switching device failed *[see col.14 lines 13-21, special instruction can be hard coded into a compiled code; and see col.12 lines 49-51, the file permits the ability to operate PTSEs having intentional error (at least one failure diagnostic function); and see col.13 lines*

6-21, summary information (information identifying said at least one failure diagnostic function)].

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9**.

o) **Regarding to Claim 25**: **Or et al. disclosed** the article of manufacture of claim method of Claim 13, wherein the computer-executable instructions *[see col.12 lines 55-65, simulated PTSEs]* further perform the function of communicating results of said at least one diagnostic function from the network switching device to a selected end point connected to the network switching device via a communications link *[see col.12 lines 36-40, the local PTSEs generation routine is modified (hence, based on results) to cause the node to generate a PTSE describing the simulated link 120 (via a communication link) in Fig.2 connecting the real PNNI node (the network switching device) to a logical node (a selected end point) in the virtual portion of the network].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 9**.

p) **Regarding to Claim 26**: **Or et al. disclosed** an article of manufacture comprising a computer-readable medium *[see Fig.2: simulated PTSE injection device 96 and Link 98]* having computer-executable instructions *[see col.12 lines 55-65, simulated PTSEs]* for performing the functions of:

generating a debug information element (IE) having a format so that it may be propagated transparently across a network of switching devices that are not configured to recognize the debug IE *[see col.12 line 55 – co.13 line 38, PTSE type, summary address information that comprises ATM information advertised by each node]*;

embedding the debug IE in a message *[see Fig.4: the ASCII file (a message) containing PSTEs generated (embedding a debug IE)]*; and

receiving results of at least one failure diagnostic function from a network switching device configured to respond to the debug IE *[see col.11 lines 10-20, a collection PTSEs that are injected into the node under test 27 (receiving results); and see col.12 lines 49-51, PTSEs having intentional error (failure)].*

Or et al. failed to explicitly teach generating a debug information element (IE) having a format so that it may be propagated transparently across a network of switching devices that are not configured to recognize the debug IE. *[However, **Or et al. disclosed** a special instruction that indicates the presence of a simulated network, the instruction directive to allow switches to be configured properly at turn on time (see col.14 lines 13-20). In addition, **Or et al. disclosed** input parameters that are used to generate PTSEs using software in the simulated PTSE injection device 96, and summary address information comprises ATM information advertised by each node (see col.12 line 63 col.13 line 38). Therefore, **Or et al. inherently disclosed** this subject matter of **Claim 26** because the special instruction and summary address information in the injection file can instruct the network switching devices that are not configured to recognize the debug IE can ignore such debug IE].*

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide such a subject matter of **claim 26** throughout the special instruction of **Or et al.**, as taught by **the applicant** so that a test in a hierarchical PNNI based ATM network can be quickly accomplished, **the motivation being** to provide a resolution of conflicting PTSEs at a switching node.

q) **Regarding to Claim 27**: **Or et al. disclosed** the debug IE is embedded in a connection-management message *[see col.2 line 66 – col.3 line 5, signaling, i.e., the message flows (connection management message), signaling with mechanisms added to support source routing (the debug IE is embedded)].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 26**.

r) **Regarding to Claim 28**: **Or et al. disclosed** the debug IE includes information specifying a network switching device on which the failure diagnostic function is performed *[see col.12 lines 49-51, PTSEs having intentional error (the debug IE includes information specifying a failure diagnostic function); and see col.13 lines 39-49, the statistics are analyzed and verified to ensure correction operation of the network (hence failure diagnostic function is performed)].*

It would have been obvious to combine **Or et al.** and the applicant for the same reason as in **Claim 26**.

10. **Claims 15-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Or et al.** (US Patent No. 6,532,237) in view of **Eriksson et al.** (US Patent No. 6,243,384).

a) **Regarding to Claim 15**: **Or et al. failed to teach** the step of the debug IE is encoded in the data packet such that it is passed along or dropped by switching devices along the communication path that are not supplied by the particular vendor.

Eriksson et al. teach such a step *[see col. 8 lines 45-52, the result returned by table handling unit 60 from a routing test (the debug IE) can be either of the following depending on the circumstances: a routing case with connected routes and nodes (the*

debug IE is passed along)]. **It would have been obvious** to one of ordinary skill in the art at the time of the invention was made to provide such a step throughout the customers of ATM network equipment some level of multi-vendor interoperability of **Or et al.**, as taught by **Eriksson et al.** in order to provide appropriate switching nodes in a plurality of nodes in a communication network, **the motivation being** to minimize manual configuration operations for PNNI ports of switches.

b) **Regarding to Claim 16**: **Or et al. failed to teach** the step of communicating results of said at least one failure analysis function from the targeted switching devices to an operator of the targeted switching devices or the communication network. **Eriksson et al. teach** such a step of communicating results *[see col. 8 lines 39-52, operator specifies an address which is to be tested (the targeted switching device), the result returned by table handling unit 60].* **It would have been obvious** to one of ordinary skill in the art at the time of the invention was made to provide such a step of communicating throughout the node under test and a virtual node in the simulated virtual ATM network of **Or et al.**, as taught by **Eriksson et al.** in order to communicate properly with an operator on test results from selected switching devices, **the motivation being** to make Or et al. more efficient.

c) **Regarding to Claim 17**: **Or et al. failed to teach** the step of the results from said at least one failure analysis function are communicated to the operator of said targeted switching devices by passing the results to a data station.

Eriksson et al. teach such a step *[see col. 8 lines 39-52, the routing test to be perform by an operator (e.g., via workstation 98 (a data station)). The result returned by table handling unit 60 from a routing test can be either of the following depending*

on the circumstances: a request for the operator to conduct a further analysis with new information (passing the results to a data station)]. **It would have been obvious** to one of ordinary skill in the art at the time of the invention was made to provide such a step throughout the customers of ATM network equipment some level of multi-vendor interoperability of **Or et al.**, as taught by **Eriksson et al.** in order to provide appropriate switching nodes in a plurality of nodes in a communication network, **the motivation being** to minimize manual configuration operations for PNNI ports of switches.

d) **Regarding to Claim 18**: **Or et al. failed to teach** the method of step wherein the results are passed to the data station via at least one communication link that connects at least one of the targeted switching devices to the data station.

Eriksson et al. teach such a step *[see Fig. 1: 98 (data station), 20 (the targeted switching device); and see col.11 lines 25-31, workstation 98, the network (via at least one communication link].* **It would have been obvious** to one of ordinary skill in the art at the time of the invention was made to provide such a step throughout the simulated virtual ATM network of **Or et al.**, as taught by **Eriksson et al.** in order to provide appropriate switching nodes in a plurality of nodes in a communication network, **the motivation being** to monitor a remote switching device appropriately.

e) **Regarding to Claim 19**: Both **Or et al.** and **Eriksson et al. failed to explicitly teach** the method of the results are passed to the data station by passing information from at least one of the targeted switching devices to another switching device along the connection path, said another switching device passing the results to the data station. *[However, **Or et al. disclosed** another use for the example Network*

60 shown in Fig.6 is to simulate the operation of two LAN emulation clients LECs connected to a LAN emulation service LES. The LES running on Node 1 has a first LEC attached to it and a second virtual LEC 74 attached to Virtual Node 10 (see Or et al. col.14 lines 48-52). Therefore, ***Or et al. inherently disclosed*** *the subject matters of Claim 19 because the operation of two LAN emulation clients LECs connected to a LAN emulation service LES from Node 1 to Node 3 (the node under test) via Node 2 and Link 67 is the same as that of the claimed limitations of Claim 19 (passing information from at least one of the targeted switching devices to another switching device along the communication* the connection path, said another switching device passing the results to the data station)*].*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide such a step throughout the simulated virtual ATM network of **Or et al.**, as taught by **the applicant** in order to provide appropriate switching nodes in a plurality of nodes in a communication network, **the motivation being** to provide a virtual network, which is useful in testing targeted switching devices in ATM communication networks.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Anthony T Ton** whose telephone number is 703-305-8956. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number

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ATT

KENNETH VANDERPUYE
PRIMARY EXAMINER